

Application No. 10/750,294  
Amendment dated October 1, 2007  
Reply to Office Action of May 2, 2007

Docket No.: BAI-03-0687 (03-0687)

**AMENDMENTS TO THE DRAWINGS**

The attached replacement sheets of formal drawings include changes to FIGURES 7A-7C.

Attachment: Replacement sheets of formal drawings

**REMARKS**

Claims 1-58 were pending in the application when an Office Action was mailed on May 2, 2007. Claims 32-57 had been withdrawn from consideration. Claims 1-8, 10, 11, 13, 14, 16-23, 25, 28-31, and 58 were rejected. Claims 9, 12, 15, 24, 26, and 27 were objected to as being dependent upon a rejected base claim but would be allowable. The Office Action was not made Final.

Claims 2 and 19 and previously-withdrawn Claims 32-57 have been cancelled. In view of the amendments and arguments set forth herein, Applicants respectfully submit that Claims 1, 3-18, 20-31 and 58 are allowable and are in condition for allowance. Applicants respectfully request entry of the Amendment, reconsideration and allowance of Claims 1, 3-18, 20-31 and 58, and issuance of a Notice of Allowance.

I. **DRAWINGS**

The drawings were objected to because of empty diagram boxes in FIGURES 7A-7C and required correction. Formal drawings of all the FIGURES, including corrected FIGURES 7A-7C, are filed herewith as replacement sheets. Applicants request entry of the replacement sheets and retraction of the objection to the drawings.

II. **SPECIFICATION**

The specification was objected to because of informalities and required correction. Except as noted below, Applicants have made the required corrections in this Amendment. The informalities noted regarding page 10, line 7, and page 18, line 9, were already made in a Preliminary Amendment filed March 11, 2004. Applicants request entry of the Amendment and retraction of the objection to the specification.

III. CLAIM OBJECTIONS

Claims 1, 2, 4, 5, 7-10, 18, 19, 22, and 58 were objected to because of informalities and required correction. Claims 2 and 19 have been cancelled, thereby rendering moot their objection. The informalities in Claims 1, 4, 5, 7-10, 18, 22, and 58 have been corrected. Applicants noted and corrected an informality in Claim 21 similar to the informality noted in Claim 21, line 2. Applicants respectfully request entry of the Amendment and retraction of the objection to the claims.

IV. CLAIM REJECTIONS – 35 U.S.C. § 102

Claims 1-8, 10, 11, 13, 14, 16-23, 25, 29-31, and 58 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 7,085,655 to Ferrer. Applicants respectfully traverse.

Applicants initially note that Claims 2 and 19 have been cancelled, thereby rendering moot their rejection.

A. THE FERRER REFERENCE

Ferrer discloses a method and device for detecting defects of at least one rotary wing aircraft rotor.

Ferrer states that “it is not necessary for the accelerometers to be located at specific locations that are known accurately”. U.S. Patent No. 7,085,655 to Ferrer, column 11, lines 12-13.

Accordingly, Ferrer also states that:

In the invention [of Ferrer], in order to adjust the rotor 6, the adjustment elements which define said adjustment parameters comprise at least the following usual elements (*associated with each of the blades 7 of the rotor 6 of the helicopter 1*):

balance weights 25 which are preferably provided at the sleeve 26 of each blade 7 of the rotor 6 and which enable rotor unbalance to be minimized by shifting the center of gravity along the span of the assembly constituted by the blade, the sleeve, and the corresponding portion of the hub;

a pitch-link 27 which may be lengthened or shortened for each blade 7 of the rotor 6, with the exception of one of the blades which represents a reference blade. It is known that by lengthening the pitch-link 27, the pitch and thus the lift of the blade is increased, and that by shortening the pitch-link 27, lift is reduced; and

compensating tabs 28 which are provided on the trailing edge 29 of each blade 7 of the rotor 6 and which enable differences in lift between the blades 7 to be compensated. *Id.*, column 11, lines 19-39 (emphasis added).

B. CLAIMS 1, 3-8, 10, 11, 13, 14, 16-18, 20-23, 25, 28-31, AND 58 ARE NOT ANTICIPATED BY FERRER

Applicants very respectfully submit that Claims 1, 3-8, 10, 11, 13, 14, 16-18, 20-23, 25, 28-31, and 58 are not anticipated by Ferrer.

As discussed above, Ferrer teaches that "it is not necessary for the accelerometers to be located at specific locations that are known accurately" and that in order to adjust the rotor the adjustment elements which define the adjustment parameters comprise "usual" elements that are associated with each of the blades of the rotor (providing balance weights at the sleeve of each blade of the rotor; lengthening or shortening a pitch-link for each blade of the rotor with the exception of one reference blade; and providing compensating tabs on the trailing edge of each blade of the rotor).

Because Ferrer does not locate accelerometers at specific locations that are known accurately and because Ferrer teaches "usual" adjustment elements that are associated with each of the blades of the rotor, Applicants respectfully submit that Ferrer cannot and does not teach or suggest "outputting diagnostic information from the ANNCV, the diagnostic information indicating

the unbalance condition of the engine, the diagnostic information including an unbalance magnitude and an angular location as a function of a rotational frequency of the engine", as recited in Claim 1, as amended, or "a fourth computer program portion adapted to output diagnostic information from the neural network inverse model, the diagnostic information indicating the unbalance condition of the engine by indicating a quantity and an angular position of corrective engine balance weights to achieve desirable vibrational characteristics at selected aircraft component and cabin locations", as recited in Claim 18, as amended, or "outputting diagnostic information from the ANNCV, derived from the unbalance condition, the diagnostic information including an unbalance magnitude and an angular location as a function of a rotational frequency of the engine", as recited in Claim 58, as amended.

Because Ferrer does not teach or suggest all of the limitations of Claims 1, 18, and 58, Applicants respectfully submit that Claims 1, 18, and 58 are not anticipated by Ferrer and are in condition for allowance. Applicants respectfully request entry of the Amendment, and reconsideration and allowance of Claims 1, 18, and 58.

Claims 3-8, 10, 11, 13, 14, 16, and 17 depend from Claim 1, and Claims 20-23, 25, and 28-31 depend from Claim 18. By virtue of their dependency and for other reasons, Applicants respectfully submit that Claims 3-8, 10, 11, 13, 14, 16, 17, 20-23, 25, and 28-31 are not anticipated by Ferrer and are in condition for allowance. Applicants respectfully request entry of the Amendment, and reconsideration and allowance of Claims 3-8, 10, 11, 13, 14, 16, 17, 20-23, 25, and 28-31.

V. ALLOWABLE SUBJECT MATTER

The Office Action stated that Claims 9, 12, 15, 24, 26, and 27 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner is thanked for indication of allowable subject matter.

VI. SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

A Supplemental Information Disclosure Statement (Supplemental IDS) is filed herewith, along with payment of the requisite fee. Applicants respectfully request entry and consideration of the Supplemental IDS, and reconsideration and allowance of Claims 1, 3-18, 20-31 and 58.

VII. CONCLUSION

In view of the amendments and arguments set forth herein, Applicants respectfully submit that Claims 1, 3-18, 20-31 and 58 are allowable and are in condition for allowance. Claims 2 and 19 have been cancelled. Claims 1, 3-8, 10, 11, 13, 14, 16-18, 20-23, 25, 28-31, and 58 are not anticipated by Ferrer. Claims 9, 12, 15, 24, 26, and 27 have been indicated as being allowable. Applicants respectfully request entry of the Amendment, reconsideration and allowance of Claims 1, 3-18, 20-31 and 58, and issuance of a Notice of Allowance.

Dated: October 1, 2007

Respectfully submitted,

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Attachments

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**FORMAL DRAWING REPLACEMENT SHEETS FOLLOW**